

4 a low pass filter coupled to the current sense resistive element; and
5 a full-wave rectifier coupled to the low pass filter and configured to generate a
6 DC signal representing the transducer load current.

1 6 (original): The driver circuit of claim 5 further comprising a current
2 transformer coupled between the current sense resistive element and a magnetic coil.

1 7 (original): The driver circuit of claim 5 wherein the low pass filter comprises a
2 fourth order active filter.

1 8 (original): The driver circuit of claim 1 further comprising an alarm circuit
2 coupled between the current sense circuit and the controller, and configured to disable the pulse
3 width modulator when the load current reaches a predetermined threshold.

1 9 (original): The driver circuit of claim 8 wherein the alarm circuit comprises a
2 comparator having a first input coupled to an output of the current sense circuit and a second
3 input coupled to a reference signal corresponding to the predetermined threshold.

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1 10 (original): The driver circuit of claim 9 wherein each of the first and second
2 switches comprises a field effect transistor.

1 11 (original): The driver circuit of claim 10 wherein the pulse width modulator is
2 configured to generate a first pulse width modulated signal PWM1 coupled to a gate terminal of
3 first field effect transistor switch, and a second pulse width modulated signal PWM2 coupled to a
4 gate terminal of second field effect transistor switch, wherein the signals PWM1 and PWM2 are
5 non-overlapping pulses.

1 12 (original): The driver circuit of claim 11 wherein the pulse width modulator
2 generates signal PWM1 at one of a rising or falling edge of the output signal of the VCO, and
3 generates signal PWM2 at the other one of the rising or falling edge of the output signal of the
4 VCO.